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# Prevalence of mental disorder in remand prisoners: consecutive case study

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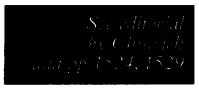

**Abstract**

***Objective*—To define the prevalence of mental disorder and need for psychiatric treatment in new remand prisoners and to determine to what extent these are recognised and addressed in prison.**

***Design*—Study of consecutive male remand prisoners at reception using a semistructured psychiatric interview.**

***Setting*—Large remand prison for men (HMP Durham).**

***Subjects*—569 men aged 21 years and over on remand, awaiting trial. *Main outcome measures*—Prevalence of mental disorder at reception, prisoners need for psychiatric treatment, identification of mental disorder by prison reception screening, and numbers placed appropriately in the prison hospital.**

***Results*—148 (26%) men had one or more current mental disorders (excluding substance misuse) including 24 who were acutely psychotic. The prison reception screening identified 34 of the men with mental disorder and six of those with acute psychosis. 168 men required psychiatric treatment, 50 of whom required urgent intervention; 16 required immediate transfer to psychiatric hospital. Of these 50, 17 were placed on the hospital wing because of mental disorder recognised at prison screening.**

***Conclusion*—Not only is the prevalence of mental disorder, in particular severe mental illness, high in this population, but the numbers identified at reception are low and subsequent management in prison is poor.**

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## Introduction

The problems of mentally disordered people in prisons were highlighted in a series of articles in 1984.[1 2] Bluglass subsequently drew attention to the lack of improvement despite numerous inquiries into the management of mentally disordered people in prison.[3] He pointed out the inadequacy of Home Office and Department of Health and Social Security reports, which relied heavily on the limited information available from censuses of mentally disturbed prisoners carried out by prison medical officers.

The effectiveness of health screening by prison medical staff has also been questioned.[4 5] The conditions and time constraints militate against the detection of clinically important information and the screening questionnaires used are of doubtful validity. In addition, some prisoners are difficult to deal with and allegations have been made of poor standards and lack of training in prison medical staff.

A recent national study of convicted prisoners using data collected by psychiatrists reported that 37% of sentenced prisoners have mental disorders.[6] The rates in remand prisoners are probably higher (S Dell, personal communication), partly because mentally disordered people are often remanded in custody for psychiatric reports. Evidence from North America suggests that mentally disordered people are more likely to be arrested than those who are not mentally disordered in similar circumstances.[7] Factors such as homelessness[8] and petty offences that are associated with mental disorder make remand more likely.

British research in the 1980s reported high rates of psychiatric morbidity in remand prisons,[9 10] but these studies may have underestimated the problem as they

were retrospective case note studies relying on diagnoses by prison medical staff. More recent studies of remand prisoners have confirmed the high rate of mental disorder in this population.[11 12] However, it is still unclear how much of the mental disorder is recognised by prison healthcare services.

We conducted this study to determine the prevalence of mental disorder in remand prisoners at the time of their reception into prison and the efficacy of the prison reception screen in detecting this. It is the first part of a longitudinal study of a cohort of new remand prisoners who will be followed throughout the course of their remand.

## Subjects and methods

Durham prison is a local male remand and short term sentence prison with a capacity of about 640. It receives nearly all men aged 21 years and over who are remanded from courts in Tyneside, Northumberland, Cumbria, and County Durham. The geography and population in this large catchment area varies considerably, although most remands come from courts covering areas of urban deprivation and high unemployment. The prison population, in common with other remand prisons, is very fluid, with large numbers of prisoners being received and discharged every day.

Current national prison policy is for all new prisoners to be screened by a hospital officer on the day of their arrival and subsequently by a prison medical officer. The hospital officer uses the F2169 first reception health screen, a standard prison questionnaire used to screen for physical and mental health problems as well as substance misuse. The prison doctor usually sees the prisoner the next working day as part of the prison induction process. We integrated our study into the induction process and so interviewed nearly all subjects within one working day of their reception into prison, usually immediately after the prison doctor's health screen.

### SUBJECTS

One of us (LB or DM) approached all unconvicted men remanded to Durham prison from 1 October 1995 to 30 April 1996 and asked them to take part in the study. Prisoners were assured about confidentiality, and we obtained written consent before the interview.

We used a semistructured interview designed specifically for the study. This incorporated well validated psychiatric instruments used by Gunn *et al* [6 11] to allow a direct comparison of results. We used the schedule for affective disorders and schizophrenia (lifetime version) to detect and classify current and lifetime mental disorders,[13] the CAGE questionnaire to assess problem drinking,[14] and the severity of dependency questionnaire to quantify levels of drug abuse and dependence.[15] Self reported levels of alcohol and drug consumption were also recorded. We measured intelligence quotients (IQ) with the quick test.[16]

If personality disorder was suspected, we asked about more specific areas of functioning, and, if appropriate, made a diagnosis using DSM-IV criteria (Diagnostic and Statistics Manual of the American Psychiatric Association). The diagnosis was recorded together with the ICD-10 equivalent. If dysfunctional personality traits were present but DSM criteria for personality disorder were not met this was recorded as "vulnerability." Interviews lasted between 20 minutes and one hour. In a few cases where serious mental disorder was suspected but inadequate information was obtained at interview, we sought information from other sources within the prison.

The interviewer recorded the diagnosis and appropriate treatment, and a random sample of the cases was reviewed by a steering committee of senior academic psychiatrists. Inter-rater reliability was monitored during a pilot and regularly throughout the study. A total of 116 prisoners were interviewed by one researcher in the presence of the other. The researchers independently recorded lifetime diagnoses and psychiatric management required, and the agreement was measured by calculating a $\kappa$ coefficient.[17] After each interview the prisoner's medical records were examined and the prison health screen inspected.

## Results

During the study 606 men were remanded to Durham prison (27 more than once). Thirty seven men returned to court the morning after admission and did not return to the prison. Of the remaining 569 men, 549 (96%) consented to be interviewed, 19 refused, and one was unfit for interview. In all, 528 (96%) interviews were fully completed; 21 were only partly completed because of language barriers, mental state disturbance, and situational constraints. We recorded IQ scores for 441 men. Poor concentration, agitation, language difficulties, or other adverse factors made the testing unreliable in the remainder.

In the 116 jointly rated interviews, 51 lifetime diagnoses of mental disorder and 184 separate substance misuse diagnoses were recorded by either one or both raters. Diagnostic agreement occurred in 216 of these ($\kappa = 0.902$). Most disagreements were over diagnoses of personality disorder ($\kappa = 0.761$) and adjustment disorder ($\kappa = 0.645$). The two researchers agreed on all 15 lifetime diagnoses of psychosis made during inter-rater interviews ($\kappa = 1.0$).

Table 1 summarises the characteristics of the population. Most of the men (378, 66%) were white and aged 30 years or under. Almost 80% of the population were unemployed or on sickness benefit. Of the 441 tested, 389 (88%) had an IQ score below the general population mean, and 57 (13%) scored 70 or less.

### PREVALENCE OF MENTAL DISORDER

Mental disorder was present in 148 (26%, 95% confidence interval 22% to 30%) of the 569 men at the time of reception into prison (table 2[2]); a further 22 men had a history of mental disorder but no current symptoms.

**Table 1**—*Demographic details of 569 unconvicted remand prisoners. Values are numbers (percentages) of prisoners unless stated otherwise*

| Variable | Value |
|---|---|
| Age (years) (n = 562): | |
| Range | 21-70 |
| Mean (SD) | 28 (7.7) |
| Median | 26 |
| IQ (n = 441): | |
| Range | 45-120 |
| Mean (SD) | 83.4 (11.8) |
| Ethnic origin: | |
| White | 542 (95) |
| Asian | 7 (1) |
| Afro-Caribbean | 4 (1) |
| Other | 12 (2) |
| No information | 4 (1) |
| Social class: | |
| I and II | 6 (1) |
| III, IV, and V | 86 (15) |
| Unemployed | 359 (63) |
| Incapacity/invalidity benefit | 93 (16) |
| Other | 5 (1) |
| No information | 20 (4) |
| Most serious charge: | |
| Dishonesty | 273 (48) |
| Violence | 224 (39) |
| Sexual offence | 29 (5) |
| Homicide | 15 (3) |
| Arson | 9 (2) |
| No information | 19 (3) |

**Table 2**—*Prevalence of current mental disorder in 569 unconvicted remand prisoners*

| Diagnosis | No (%) of subjects |
|---|---|
| Psychotic disorders: | |
| Schizophenia and other psychotic disorders | 20 (4) |
| Affective psychosis | 4 (1) |
| Non-psychotic mood disorders: | |
| Major mood disorders | 13 (2) |
| Dysthymic disorder | 14 (2) |
| Anxiety disorders | 34 (6) |
| Adjustment disorders | 17 (3) |
| Personality disorder | 38 (7) |
| Mental retardation* | 6 (1) |
| Other disorders: | |
| Intermittent explosive disorder | 3 (1) |
| Paedophilia | 2 (0) |
| Cognitive disorder | 1 (0) |
| All disorders except substance misuse | 148† |

*Assessed only in the 441 subjects who had IQ measured. †Two subjects with personality disorders and one with mental retardation also had current psychotic disorders. One subject with personality disorder also had a current anxiety disorder.

Lifetime rates were 7% (6% to 8%) for psychosis and for non-psychotic mood disorders. If diagnoses of substance abuse or dependency were included the number of men with current mental disorders rose to 354 (62%, 60% to 64%) and with lifetime disorder to 404 (71%, 69% to 73%). In addition to those with a diagnosis of personality disorder, 68 men (12%, 11% to 13%) were judged to have significant personality vulnerabilities.

In all, 168 men required some form of psychiatric input (table 3), and 50 needed urgent attention. Of these 50, 16 required immediate transfer to an outside psychiatric hospital (14 psychotic, one severely depressed, and one mentally retarded), five needed further assessment in the prison hospital (most of whom would probably require hospital transfer), and 29 needed prison hospital placement.

### PRISON RECEPTION SCREENING

Screening by the hospital officers and prison medical officers identified current mental disorder in 52 (9%) men. Forty eight (8%) were initially placed on the hospital wing, although in 21 cases this was for reasons other than mental health.

Of the 148 men we identified with current mental disorder (excluding substance abuse or dependence), 34 (23%) were also identified by the prison medical screen (difference = 0.169, 95% confidence interval 0.132 to 0.206). Only six of the 24 men who were acutely psychotic had any abnormality of mental state identified by the prison screening. Mental disorder was said to be present in a further 18 men in whom we found no evidence of this.

Of the 50 men we judged to require urgent intervention, 17 were picked up by the screen and placed in the prison hospital; three others were placed there for non-psychiatric reasons. The remaining 30 men (including 16 who were acutely psychotic) were placed in ordinary cells.

**Table 3**—*Psychiatric management required in 569 unconvicted remand prisoners*

| Initial management | No (%) of subjects |
|---|---|
| None | 386 (68) |
| Outpatient referral (within prison setting): | |
| General and forensic psychiatry | 99 (17) |
| Request specialist psychiatric opinion (mental retardation, sex offending, etc) | 19 (3) |
| Hospital wing: | |
| Manage on hospital wing | 29 (5) |
| Assess on hospital wing (transfer to psychiatric hospital probably required) | 5 (1) |
| Immediate transfer to psychiatric hospital | 16 (3) |
| Inadequate information (refusers) | 15 (3) |

**Key messages**

- Few accurate data are available on the prevalence of mental disorder among remand prisoners
- In this study in Durham prison 26% had a serious mental disorder
- Only about a quarter of the mentally disordered patients were recognised by the prison doctor and hospital officer
- Only two fifths of patients who required urgent psychiatric treatment were put into the prison hospital
- Improved diagnosis of psychiatric illness in prison will greatly increase the pressure on psychiatric beds

## Discussion

Our findings are based on inmates of one prison with a large catchment area, but there is no reason to believe that Durham prison differs significantly from other remand prisons. The reception screen is used nationally, and the demands on prison health staff are similar. We believe, therefore, that the results of this study can be generalised throughout the remand population.

Twenty six per cent of new prisoners had a current mental disorder, nearly one third of whom had a serious disorder. Most of these disorders were undetected and so untreated. Although these men may have had their mental disorder identified and treated later on in their remand, our impression from our initial follow up is that this is unlikely. In a busy remand prison abnormal behaviour is often tolerated or perceived as a discipline problem and dealt with punitively, while the "quietly mad" are ignored.

Failure to identify psychiatric illness in men entering remand prisons means that the opportunity for treatment is lost. This is important since many of these men might not otherwise come to the attention of healthcare services and the severely psychotic inmates may be at high risk of suicide.

The reception screening undertaken by the prison service is neither sensitive nor specific for detecting mental disorder. Reasons for this may include lack of appropriately experienced or trained staff to conduct the screening, a questionnaire of doubtful validity, time constraints, a highly mobile population, and a perception among prisoners that prison healthcare staff do not have their best interests as a priority.

Health screening on reception into prison should provide an important opportunity to detect mental disorder and provide prompt and appropriate treatment that, particularly in the case of remand prisoners, could be continued in the community. However, to achieve this screening will need to become more effective. If more psychiatric morbidity is identified, the availability of psychiatric bed may become a problem. Beds need to be available at all levels of security to take patients rapidly from prison or as part of a court diversion scheme. Psychiatric beds in the Northern region, as in the rest of the country, are in short supply and often impossible to find at short notice. Our results provide some indication of the extent of the shortfall.

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# Point prevalence of mental disorder in unconvicted male prisoners in England and Wales

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**Abstract**

***Objectives*—To determine prevalence of mental disorder among male unconvicted prisoners and to assess the treatment needs of this population.**

***Design*—Semi-structured interview and case note review of randomly selected cross section of male remand population. Non-attenders were replaced by the next name on prison roll.**

***Setting*—Three young offenders' institutions and 13 adult men's prisons.**

***Subjects*—750 prisoners, representing 9.4% cross sectional sample of male unconvicted population.**

***Main outcome measures*—Prevalence of ICD-10 diagnoses of mental disorder, and associated treatment needs.**

***Results*—Psychiatric disorder was diagnosed in 469 (63%) inmates. The main diagnoses were: substance misuse, 285 (38%); neurotic illness, 192 (26%); personality disorder, 84 (11%); psychosis, 36 (5%); other and uncertain, 36 (0.5%). Subjects could have more than one diagnosis. The average refusal rate was 18%. In total 414 inmates (55%) were judged to have an immediate treatment need: transfer to an NHS bed, 64 (9%); treatment by prison health care services, 131 (17%); motivational interviewing for substance misuse, 115 (15%); and therapeutic community placement, 104 (14%).**

***Conclusions*—Mental disorder was common among male unconvicted prisoners. Psychosis was present at four or five times the level found in the general population. Extrapolation of our results suggests that remand population as a whole probably contains about 680 men who need transfer to hospital for psychiatric treatment, including about 380 prisoners with serious mental illness.**

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## Introduction

In 1993 about 48 000 people—9% of those awaiting trial—were remanded into custody by the courts to be held as unconvicted prisoners until the trial. About a fifth of all those remanded in custody were acquitted, and a further fifth of males received a community sentence.[1] It is government policy that prisoners on remand who have a serious mental disorder should be transferred to psychiatric hospital, but this is often not done.[2 3] Even when a prisoner is transferred there are delays,[4] during which the patient remains in prison and is at increased risk of self harm and suicide.[5 6] Studies conducted in one London remand centre showed that two thirds of psychotic men were rejected for hospital admission,[4] and the outcome was even worse for other diagnoses.[2]

In addition to causing unnecessary suffering to mentally ill prisoners, this situation creates a risk to the public. Three recent inquiries into killings by mentally ill people described previous remands in custody, during which mental disorder was recognised but not adequately managed.[7-9] Some of the most difficult psychiatric patients in the country are assessed and treated entirely within prisons, which are not designed for this purpose and cannot match the standards of hospitals. For example, the premises of prison health services are not regarded as "hospitals" under the Mental Health Act (1983), and so patients cannot be treated against their will.

Thus, the population of remanded prisoners represents a pool of unmet need for psychiatric treatment of unknown size. About a third of all male prisoners who are sentenced can be given a psychiatric diagnosis, including 2% who are psychotic.[10] Higher levels of morbidity would be predicted in the remand population, because this group have a variety of risk factors for mental illness (such as substance misuse, personality difficulties, and the stress of reception into custody),[11] and the suspected presence of mental disorder may lead to a remand into custody for the preparation of reports. Undocumented demand is likely to remain unmet.

This paper describes the point prevalence of psychiatric disorder in remanded prisoners in England and Wales, together with an assessment of the immediate treatment needs of those prisoners who were given a diagnosis. A list of the prisons visited and copies of the interview schedule and the coding manual can be obtained from us and are included in the report of our study.[12]

## Method

### SELECTION OF PRISONS AND SUBJECTS

Prisons are grouped by the Home Office into three geographical directorates (North and Midlands; London, East Anglia, and Kent; Central England, Wales, and the West Country). We tried to see a 10% sample from each directorate. It is likely that prisoners with obvious mental disorder will be accommodated in larger prisons with more health services so, in order to reduce bias, we included a cross section from each type of prison (large inner city; smaller, local prisons; purpose built remand centres; and prisons representative of all levels of security) within each directorate. The study